

# **Technical Bulletin**

# Installing Tone Rings on Planetary Wheel Ends Used on Meritor MORH2P035 Series Rear Drive Axles

# **Hazard Alert Messages**

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

### **WARNING**

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

### How to Obtain Additional Maintenance, Service and Product Information

Refer to Maintenance Manual MM-09168, Heavy-Duty Rigid Rear Drive Axles with Planetary Wheel Ends; and Maintenance Manual MM-1189, Off-highway Axle Planetary Wheel Ends. To obtain these publications, visit Literature on Demand at Meritor.com.

### **How to Obtain Parts**

Contact Meritor's Commercial Vehicle Aftermarket at 888-725-9388.

#### Table A: Part Required (per Wheel End)

Qty.	Description	Part Number
1	0-Ring	982108
1	Tone Ring	3237R1318
1	Wheel Nut	1227S1735
1	Seal Assembly	A 1205P2798

# **Tools Required**

- 0.005" feeler gauge
- Personal protection equipment (PPE) including heat-resistant gloves for handling hot items, rated to withstand oven temperature of 350°F (177°C)
- Mild-abrasive wire wheel for hub cleaning
- Scotch-Brite<sup>™</sup> pad or 3M brand cleaning pad for hub cleaning
- Oven to heat tone ring

# **Tone Ring Installation**

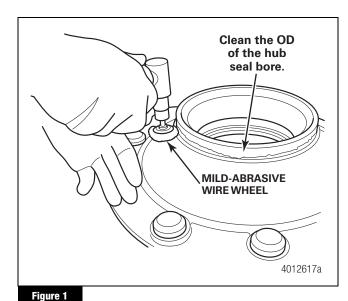
This bulletin provides updated instructions for installing tone rings onto Meritor MORH2 planetary wheel-end hub assemblies.

### **Procedures**

#### Removal

- 1. Wear safe eye protection. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving.
- Raise the vehicle so the wheels to be serviced are off the ground. Support the axle to be serviced with appropriate capacity safety stands.
- 3. Remove the wheel and tire assemblies from the wheel ends as per the OEM instructions.
- 4. Place a drain pan under the hub drain plug.
- 5. Rotate the wheel end so the drain plug is at its lowest position.
- 6. Remove the drain plug and allow the hub oil to drain completely from the wheel end.
- 7. Remove the planetary cover from the wheel end. Refer to Maintenance Manual MM-1189 for instructions on removing the planetary cover assembly from the hub.
- Remove the hub and stud assembly from the axle spindle.
   Refer to Maintenance Manual MM-1189 for instruction on removing the hub and stud assembly from the axle spindle.

- 9. Remove and clean the hub bearings. Inspect the bearings as per Maintenance Manual MM-1189.
  - If the bearing can be reused, set them aside for reassembly. Otherwise, discard the bearings and obtain a new set of bearings for hub reassembly.
- 10. Clean all oil/grease from the hub bore cavity.
- 11. Remove all debris and clean the OD of the hub seal bore using a Scotch-Brite™ pad or 3M brand cleaning pad. Use a mild-abrasive wire wheel to remove contaminants and any surface rust. Figure 1 and Figure 2.





### Installation

#### ♠ WARNING

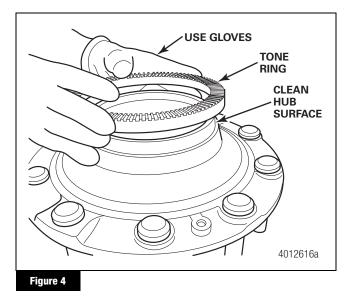
Wear heat-resistant gloves and appropriate protective clothing when working with heating equipment and heated parts. Coming into contact with hot surfaces and parts can result in serious personal injury.

1. Heat the tone ring in an appropriate oven for 20 minutes at 350°F (177°C). Wear heat-resistant gloves and appropriate protective clothing when handling heated parts. Figure 3.



Figure 3

2. Place the hub face down on a clean surface and install the tone ring onto the hub's outer diameter. Figure 4.



#### **WARNING**

The tone ring will remain hot for a period of time after installation. Allow the tone ring to cool before continuing service. Contact with hot parts can result in serious personal injury or damage to other components.

3. Allow the tone ring to adequately cool before you continue servicing the hub.

- 4. Use a 0.005" inch feeler gauge as shown to ensure the tone ring is fully seated and is not cocked on the hub. Figure 5.
  - If it is not fully seated or if it is cocked: Remove the tone ring and repeat the installation process.

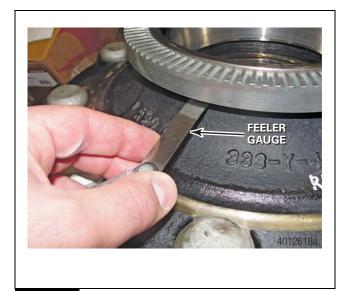


Figure 5

- 5. After allowing the tone ring to cool completely, install the hub onto the spindle as per Maintenance Manual MM-1189.
- 6. Install the wheel-end planetary cover as per Maintenance Manual MM-1189.
- 7. Fill the wheel-end assembly with the correct level of oil as per Maintenance Manual MM-1189.
- 8. Install the wheel and tire assembly as per the OEM instructions.



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